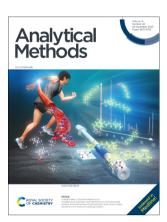
Analytical Methods

rsc.li/methods

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1759-9679 CODEN AMNECT 15(48) 6613-6752 (2023)



Cover

See Hideaki Kakeya, Tsunehisa Hirose et al., pp. 6648-6655. Image reproduced by permission of NACALAI TESQUE, INC. from Anal. Methods, 2023, 15, 6648.

MINIREVIEW

6620

Enzyme-free electrochemical sensor platforms based on transition metal nanostructures for clinical diagnostics

Govindhan Maduraiveeran*

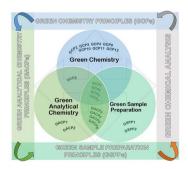


CRITICAL REVIEW

6631

Green chemical analysis: main principles and current efforts towards greener analytical methodologies

Milica Branković*



Editorial Staff

Executive Editor

Rebecca Garton

Deputy Editor

Alice Smallwood

Editorial Production Manager

Sarah Whitehouse

Development Editor

Celeste Brady

Publishing Editors

Gabriel Clarke, Derya Kara-Fisher, Emma Stephen, Ziva Whitelock

Publishing Assistant

Andrea Whiteside

Editorial Assistant

Leo Curtis

Publisher

Jeanne Andres

For queries about submitted articles please contact Sarah Whitehouse, Editorial production manager, in the first instance. E-mail methods@rsc.org

For pre-submission queries please contact Rebecca Garton, Executive editor.

E-mail methods-rsc@rsc.org Analytical Methods (electronic: ISSN 1759-9679) is published 48 times a year by the Royal Society of Chemistry,

Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK

Tel +44 (0)1223 432398; E-mail orders@rsc.org

2023 Annual (electronic) subscription price: £2416; US\$4255. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing

to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at www.rsc.org/ip

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office:

Burlington House, Piccadilly, London W1J 0BA, UK,

Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017; E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

Analytical Methods

rsc.li/methods

Early applications of new analytical methods with clear societal impact.

Editor-in-Chief

Scott Martin, St. Louis University, USA

Associate Editors

Jonas Bergquist, Uppsala University, Sweden Wendell Coltro, Federal University of Goiás,

Juan García-Reyes, Jaén University, Spain Tony Killard, University of the West of England, UK

Zhen Liu, Nanjing University, China Matthew Lockett, University of North Carolina at Chapel Hill, USA

Chao Lu, Beijing University of Chemical Technology, China

Fiona Regan, Dublin City University, Ireland Michael Roper, Florida State University, USA Jill Venton, University of Virginia, USA

Advisory Board

Jailson de Andrade, Federal University of Bahia, Brazil

Lane Baker, Indiana University, USA Craig Banks, The Manchester Metropolitan University, UK

Emanuel Carrilho, University of São Paulo, James Chapman, The University of

Queensland, Australia Yi Chen, Chinese Academy of Sciences, China

Christopher Easley, Auburn University, USA Susheel Mittal, Thapar University, India Anthony Gachanja, Jomo Kenyatta University Antonio Molina-Díaz, University of Jaén, of Agriculture and Technology, Kenya Amanda Hummon, Ohio State University,

Lauro Kubota, Instituto de Química, Brazil Ally Lewis, University of York, UK Juewen Liu, University of Waterloo, Canada Susan Lunte, University of Kansas, USA Jim Luong, Dow Chemical Canada ULC, Canada

Koji Otsuka, Kyoto University, Japan Brett Paull, University of Tasmania, Australia Zachary Schultz, Ohio State University, USA Guobao Xu, Changchun Institute of Applied Chemistry, China

Information for Authors

Full details on how to submit material for publication in Analytical Methods are given in the Instructions for Authors (available from http://www.rsc.org/authors). Submissions should be made via the journal's homepage:

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)-Reproduced by permission of the Royal Society of Chemistry.

This journal is © The Royal Society of Chemistry 2023. Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA. Registered charity number: 207890

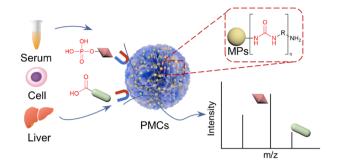


COMMUNICATION

6643

Polyurea-magnetic hierarchical porous composites for profiling of anionic metabolites

Renjun Zhang, Zhizhen Lai, Hongtao Tian, Meng Wang, Yang-Yang Guo, Mo Zhang,* Jiang Zhou,* Ming-Shui Yao* and Zhili Li*

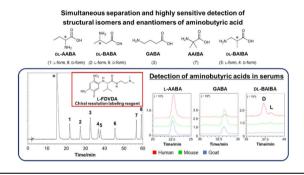


PAPERS

6648

Simultaneous separation and identification of all structural isomers and enantiomers of aminobutyric acid using a highly sensitive chiral resolution labeling reagent

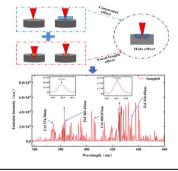
Makoto Ozaki, Motoshi Shimotsuma, Takefumi Kuranaga, Hideaki Kakeya* and Tsunehisa Hirose*



6656

A study of the spectral signal effect of self-holes in metal additive manufacturing components using laser-induced breakdown spectroscopy (LIBS)

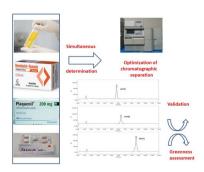
Jingjun Lin, Zexin Hao, Jiangfei Yang, Changjin Che* and Xiaomei Lin*



6666

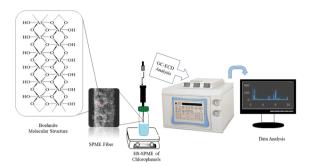
A validated eco-friendly HPLC-FLD for analysis of the first approved antiviral remdesivir with other potential add-on therapies for COVID-19 in human plasma and pharmaceuticals

Asmaa M. Taha, Wafaa S. Hassan, Manal S. Elmasry* and Rania A. Sayed



PAPERS

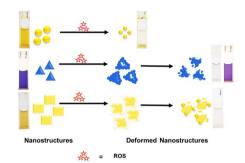
6679



Application of boehmite as a fiber coating for headspace solid-phase microextraction of chlorophenols from aqueous samples

Mohammad Saraji,* Monir Fouladi, Gholamhossein Mohammadnezhad and Narges Mehrafza

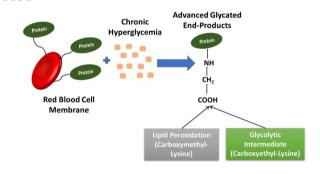
6687



Spectroscopic/colorimetric dual-mode rapid and ultrasensitive detection of reactive oxygen species based on shape-dependent silver nanostructures

Varsha UshaVipinachandran and Susanta Kumar Bhunia*

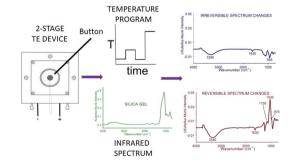
6698



UPLC-MS/MS method for quantitative determination of the advanced glycation endproducts N^{ϵ} -(carboxymethyl)lysine and N^{ϵ} -(carboxyethyl)lysine

Lauren A. Skrajewski-Schuler, Logan D. Soule, Morgan Geiger and Dana Spence*

6706



Precise temperature control and rapid heating/ cooling of infrared spectroscopy samples with a twostage thermoelectric device

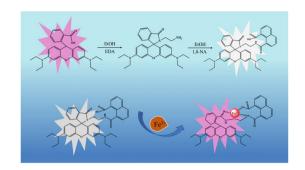
Robert L. White

PAPERS

6716

Preparation and performance study of rhodamine B naphthylamide, a fluorescent probe, for the detection of Fe³⁺

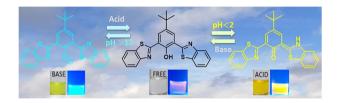
Jialin Wang, Shenghua Lv,* Jingjing Zuo, Shan Liang, Juhui Yang, Leipeng Liu and Dequan Wei*



6722

A tuning fork-shaped bisbenzothiazole derivative as a pH-responsive digital fluorescent probe and its ex vivo evaluation

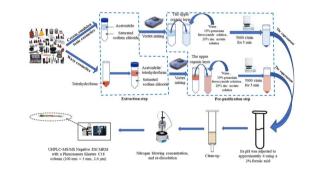
Priya Ranjan Sahoo, Nikhil Kumar, Keloth Sairam, L. K. Gulati, G. K. Gulati, Anupama Datta and Satish Kumar*



6727

Determination of polyfluoroalkyl substances in cosmetic products using dispersed liquid-liquid extraction coupled with UHPLC-MS/MS

Chengjin Tang, Wenyao Liang, Zemin Xia, Jinming Ye, Hebin Liang, Junjie Cai, Jianhua Tan* and Qilai Xie*



6738

Construction of a cleavable linker chemistry-based HBEXO-Chip to isolate circulating exosomes for breast cancer diagnosis

Shanshan Zhou, Zongxin Li, Yan Li, Xiaoyao Wang and Kun Deng*

